

Patent claims.

1. The use of at least one active ingredient inhibiting a component of the NF-kB signal transduction pathway such that a virus multiplication is inhibited, for preparing a pharmaceutical composition for the prophylaxis and/or therapy of at least one viral disease.

2. The use of at least one active ingredient according to claim 1, wherein the component of the NF-kB signal transduction pathway is selected from the group consisting of "tumor necrosis factor receptor associated factor (TRAF), NF-kB inducing kinase (NIK), mitogen-activated protein kinase kinase kinase 1 (MEKKK1), mitogen-activated protein kinase kinase kinase 3 (MEKKK3), AKR mouse thymoma kinase (AKT), TGF $\beta$  activated kinase (TAK1), inhibitor of NF-kB kinase alpha (IKKalpha), inhibitor of NF-kB kinase beta (IKKbeta), NEMO, inhibitor of kB (I $\kappa$ B), RELA (p65), C-REL, RELB, NF-kB1 (p105), NF-kB2 (p100), P50, P52".

3. The use of at least one active ingredient according to one of claims 1 to 2, wherein the active ingredient(s) is (are) selected from the group consisting of "inhibitors of a kinase of the NF-kB signal transduction pathway, e.g. non-steroidal anti-inflammatory substances inhibiting the NF-kB activation, such as phenylalkyl acid derivatives, for instance sulindac or de-

rivatives of sulindac such as sulindac sulphoxide, sulindac sulphone, sulindac sulphide or benzylamide sulindac analogues, salicylic acid derivatives such as salicylic acid or acetyl-salicylic acid, salicylamide, salacetamide, ethenzamide, diflunisal, olsalazine or salazosulfapyridine, curcumin, antioxidants such as pyrrolidine dithiocarbamate (PDTC), oxicams as for instance piroxicam, vitamin E and derivatives thereof, such as pentamethyl hydroxychroman (PMC), 17 beta oestradiol and derivatives thereof, polyphenoles of tea as for instance (-)-epigallo-catechin-3-gallate (EGCG), Bay11-7182, peptides inhibiting the interaction of at least two components of the NF-kB signal transduction pathway, for instance peptides binding to NEMO, inhibitors of the proteasome such as PS-341 and lactacystin, antisense oligonucleotides specifically adding to the DNA sequence or m-RNA sequence coding for a component of the NF-kB signal transduction pathway and inhibiting the transcription or translation thereof, for instance antisense nucleotide sequences specific for p65 or p50, dominant-negative mutants of a component of the NF-kB signal transduction pathway, dsoligonucleotides, which are suitable for the specific degradation of the mRNAs of a component of the NF-kB signal transduction pathway by the RNAi technology, antibodies or antibody fragments specific for a component of the NF-kB signal transduction pathway, or fusion proteins, containing at least one antibody fragment, for instance a Fv fragment, which inhibit at least one component of the NF-kB signal transduction pathway".

4. The use of at least one active ingredient according to one of claims 1 to 3, wherein the viral disease is caused by an infection by RNA or DNA viruses, preferably influenza viruses.

5           5. A combination preparation for the prophylaxis and/or therapy of at least one viral disease, comprising at least two different active ingredients, wherein at least one active ingredient is selected from the group according to  
10 claim 3, wherein the combination preparation can be used in the form of a mixture or as individual components for the simultaneous or not simultaneous application at identical or different places.

15           6. A combination preparation according to claim 5, wherein at least one antivirally acting substance is 1-adamantanamine, rimantadine, a neuraminidase inhibitor or a nucleoside analogue such as ribavirin.

20           7. The use of an active ingredient or of a combination preparation according to one of claims 1 to 6 for the prophylaxis and/or therapy of an infection by negative-strand RNA viruses, in particular influenza viruses or Borna vi-  
25 ruses.

8. The use of an active ingredient or of a combination preparation according to one of claims 1 to 7 in a preparation for the nasal,

bronchial or aerogenic administration, wherein the active ingredient is present in a concentration from 0.1 to 4 mM in the preparation, wherein the total amount of the active ingredient per administration unit is preferably in the range of 0.1 to 70 mg, wherein the pharmaceutical composition is prepared and confectioned such that the daily dose for man does not exceed 70 mg.

9. A test system for identifying active ingredients, which act on at least one component of the NF-kB signal transduction pathway such that a virus multiplication is substantially inhibited, comprising a. at least one cell infectible by at least one virus, said cell containing the NF-kB signal transduction pathway and at least one virus infecting the cells, or b. at least one cell infected by at least one virus, said cell overexpressing the NF-kB signal transduction pathway.

10. A test system according to claim 9, wherein the virus is an RNA or DNA virus, preferably an influenza virus.

11. A test system according to claim 9 or 10, wherein the cell contains at least one overexpressed component of the NF-kB signal transduction pathway, also in a constitutively active mutated form.

12. A test system according to one of claims 9 to 12, wherein it contains a cell, in which at least one gene coding for at least one dominant-negative mutant of at least one component of the NF-kB signal transduction pathway is overexpressed.

13. A test system according to one of claims 9 to 12, wherein it contains a cell, in which the expression for at least one component of the NF-kB signal transduction pathway is overexpressed.

14. A method for identifying at least one active ingredient for the prophylaxis and/or therapy of viral diseases, said active ingredients substantially inhibiting the multiplication of viruses in viral diseases, comprising the following steps: a. bringing at least one potential active ingredient into contact with at least one test system according to one of claims 9 to 13, b. determination of the effect on the virus multiplication, and c. selection of a potential active ingredient, if the virus multiplication is reduced compared to an execution of step a., however without a potential active ingredient or with an active reference ingredient or with a control substance.

15. A method for preparing a drug for the prophylaxis and/or therapy of at least one viral disease, said drug inhibiting the multiplication of viruses in the case of viral diseases, com-

prising the following steps: a. executing a test  
system according to one of claims 9 to 14, b.  
reacting the identified active ingredient(s) in  
a physiologically effective dosage with at least  
5 one auxiliary and/or additional substance and a  
defined galenic preparation.